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A Survey of Present and Potential Postsecondary Vocational Education Programs in Montana

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A SURVEY
OF
PRESENT AND POTENTIAL
POSTSECONDARY
VOCATIONAL EDUCATION

BY

KENNETH F. JOHNSTON, Intern - WICHE

October, 1975 Helena, Montana

SPONSORED BY:

Montana State Advisory Council

For Vocational Education

A SURVEY OF PRESENT AND POTENTIAL POST SECONDARY VOCATIONAL EDUCATION PROGRAMS IN MONTANA

Presented to the Montana Advisory Council for Vocational Education In Cooperation with the Western Interstate Commission for Higher Education

BY

KENNETH F. JOHNSTON, Intern - WICHE

October 1975 Helena, Montana

SPONSORED BY:

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A B S T R A C T

A SURVEY OF PRESENT AND POTENTIAL POST SECONDARY VOCATIONAL EDUCATION PROGRAMS IN MONTANA

The purpose of this study is to determine what is presently being offered in post secondary education in Montana and what could and should be offered; where this could best be done and by whom; considering costs, manpower needs, and present capabilities of schools. The topic was selected by the Montana Advisory Council for Vocational Education.

The methodology of the study was to first compare costs between similar programs and then explain any cost inconsistancies with the use of a questionnaire which would be administered to all eight post secondary vocational schools.

In conclusion the study found that using a cost comparison between programs would not provide valid data to make the decisions outlined in the purpose because several changes would need to be made in the manner in which records are kept at the state level. It was, therefore, concluded that the best method of comparing programs was to compare the cost per "full time equivalent" to the need each program is fulfilling.

A questionnaire was administered to the directors or presidents of the eight Montana post secondary schools conducting vocational education. Based on the results of that questionnaire, the following recommendations were made. First, the state vocational system should be more clearly defined and communicated to the institutions involved. Second, it was recommended criteria be established regarding duplication and future program location. Third, statewide needs assessments and placement follow ups should be conducted by a single impartial party.

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1 INTRODUCTION

This study was initiated by the Montana Advisory Council for Vocational Education, who recognized the need for more data to assist the Board of Public Education in making the following decisions:

a. What vocational programs should be taught at post secondary vocational schools?
b. What vocational programs should be discontinued?
c. How many similar programs should be made available and;
d. at what locations should they be conducted?

Because of the broad scope of the study and the complex nature of the topic, it became apparent that the study would need to be redefined to fit within the twelve week time limit given for this project. The studies purpose is now twofold. First, it is to collect the thoughts of the eight directors (or presidents) of the post secondary vocational schools regarding several related topics. Secondly, it is to act as a pilot study so that reliable and valid statistical data can be developed to aid decision makers with the four questions stated above.

This research is financed by the Western Interstate Commission for Higher Education, who allocated $1200 for wages and $100 for miscellaneous expenses. Twelve weeks were available to complete the study. These "WICHE" studies are usually conducted once each summer by an intern from one of the colleges or universities in Montana. Topics for research can vary from year to year and results of the studies are available at the Montana Advisory Council for Vocational Education in Helena. The intern for this project is a 1975 graduate of Montana State University with B.S. degree in Commerce (Distributive Education option). Vocational experience includes vocational certification in Montana (approximately 5800 hours of work experience) plus one year of auto mechanics.

2 PURPOSE

2.1 The primary purpose of this study is to collect the opinion of the director or president of the following post secondary vocational schools:

Billings Vo-Tech Center - - - - - - - - - - - - - - -Billings, Montana
Great Falls Vo-Tech Center - - - - - - - - - - - - Great Falls, Montana
Helena Vo-Tech Center - - - - - - - - - - - - - - - - - Helena, Montana
Missoula Vo-Tech Center - - - - - - - - - - - - - - - - Missoula, Montana
Northern Montana College - - - - - - - - - - - - - - - - - Havre, Montana
Dawson Community College - - - - - - - - - - - - - - Glendive, Montana
Flathead Community College - - - - - - - - - - - - - Kalispell, Montana
Miles Community College - - - - - - - - - - - - - - - Miles City, Montana

Opinions regarding the following topics were explored:

2.1.1 The long range plans and objectives of the school
2.1.2 The needs the vocational programs are fulfilling.
2.1.3 The role of each institution in the state vocational system.
2.1.4 The advantages of various locations.

2.2 The secondary purpose is to help decision makers determine:

a. What programs should be taught and at which locations:
b. What programs should be dropped?

3 OBJECTIVES

3.1 Compile a list of all post secondary vocational programs presently being conducted in Montana and what occupation they prepare the student for.

3.2 Compile the opinions of the directors of the eight post secondary vocational schools regarding:
   a. The long range plans of each institution involved in this study; what is needed to fulfill the objectives and why the objective was set.
   b. The need each institution feels it is fulfilling or should be fulfilling.
   c. The advantages of conducting vocational programs at the present locations.

3.3 Determine if there is a consensus among the eight post secondary vocational schools regarding their role in the state system.

3.4 Devise a means of comparing vocational programs so the advantages of each location can be determined. (both cost and placement advantages)

4 METHODOLOGY

4.1 RESEARCH DESIGN

The intention of this study is to devise a means of comparing and analyzing the various vocational programs on a common basis. (Cost Comparison Analysis) It was hoped that by comparing program placement with program cost that the following could be determined:

a. The relative efficiency of each program in terms of cost per student and cost per student placed.
b. The advantages or disadvantages of program location.
c. Who the vocational programs are serving. (that is, part-time compared to full-time or pre-service compared to upgrading)

A questionnaire would then be used to follow-up the inconsistancies in placement and cost comparison to explain why. The questionnaire is a very important part of the method because of the wide range of variables which can substantially increase or decrease cost and placement figures. For example, there is one welding program whose cost is considerably higher than others. Upon initial examination of the comparisons one would be lead to believe that the program is inefficient. The follow-up questionnaire would point out that a branch welding program is being conducted 350 miles away. Extra staff, equipment and facilities are needed which increase the cost. The real question may not be whether or not the program is effi-

cient, but what needs the branch program serves and if the state can afford to conduct the program.

A further intention of the writer was to calculate a "cost per Full Time Equivalent (FTE) (see definition 8.2). A cost per FTE would give a better estimate of the cost of a program because it would reflect all fixed costs and enrollment.

4.2 DATA NEEDED

For purposes of the "cost comparison analysis" the following data was needed: (All data is for school year 1973 to 1974)

1. Placement follow-up data for the eight post secondary vocational locations. Information for the five vo-tech centers was obtained from the Office of the Superintendent of Public Instruction (OSPI) information on the three community colleges and Northern Montana College were not available at the time the study was written. (see limitation 5.1 page 5)
2. Enrollment figures and breakdowns on full time and part time students were obtained from the OSPI for the five vo-tech centers.
3. Both ancillary and program costs were taken from the 1973-1974 budget requests for the five vo-tech centers.
4. A complete listing of public post secondary training being conducted with the assistance of state and federal vocational education in Montana was then compiled. This list was corrected and updated by each school.

The purpose of the questionnaire was to record data which could not be obtained otherwise. The information the questionnaire is designed to determine is:

1. The long range plan of each institution involved in this study and what is needed to fulfill the objectives and why the objectives were set.
2. The needs each institution is fulfilling.
3. The advantages of conducting vocational programs at their present locations.
4. Occupational areas post secondary vocational education could serve but is not.
5. Determine if there is a consensus among the eight post secondary vocational schools, regarding their role in the state system.

4.3 THE QUESTIONNAIRE

The questionnaire consisted of 20 open-ended questions on a variety of topics relating to post secondary vocational education. Each question and response relates to one of the four categories listed below: (an example of the questionnaire and rationale for each question is exhibited on page 19)

1. The long range plans of the institutions (how and why they are being made).
2. Needs the institution is fulfilling or feels it should be fulfilling. (who is the school serving and what industries are

being served)
3. Advantages of each institutions location.
4. Role of the institution in the state plan.

Although there are certain disadvantages to an open-ended questionnaire, (see limitation 5.5) this style was selected for several reasons. Open-ended questions are excellent for preliminary types of research. Because the choice of response has not already been determined for the interviewee, a truer, more detailed response is given. Secondly, open-ended questions avoid "putting words in the respondents mouth", because the length of the response is not defined, as it is with other forms of questions, the respondent is likely to give more than the obvious kind of answer.

4.4 QUESTIONNAIRE DELIVERY AND VERIFICATION

Personal interviews were arranged with the directors of each of the eight post secondary vocational schools. In many cases the directors consulted other school personnel associated with their vocational education programs during the course of the interview. In one case, the school president was unavailable and the director of vocational education was interviewed in his place. The interviews lasted from one and a half hours, to three hours. Due to the length of the interview and the length of the answers given by the repondents, it was impossible to quote the directors exactly as they responded. Notes were taken by the interviewer during the interview and then paraphrased into short answers. To avoid misunderstandings and misinterpretations, the paraphrases responses were then mailed back to the respective directors for their review and correction.

DATES OF SCHOOL VISITATIONS:

LOCATION	DATE	PERSON INTERVIEWED
Miles City	July 9, 1975	Mr. Kailey
Glendive	July 10, 1975	Mr. Lenert
Billings	July 11, 1975	Mr. Burgess
Havre	July 15, 1975	Dr. VanderLinde
Great Falls	July 16, 1975	Mr. Carey
Kalispell	July 25, 1975	Dr. Lindahl
Missoula	July 26, 1975	Mr. Downey
Helena	July 30, 1975	Mr. Korizek

4.5 FINANCIAL COMPARISON

4.5.1 Cost Comparison Analysis

The Cost Comparison Analysis includes the ancillary costs plus any costs which all programs benefit from. (see 8.7 fixed costs) These fixed costs were then divided by the total number of Full Time Equivalents (see 8.2 full time equivalents) for a 12 month period. The resulting figure represents a fixed cost per FTE.

$$\frac{\text{Fixed Costs}}{\text{Total FTE for Year}} = \text{Fixed Cost Per FTE}$$

The fixed cost per FTE is then multiplied by the total number of FTE (in a 12 month period) for the program in question. After this figure is determined it is added to the "total program budget" (see 8.8 Program Budget Costs) to determine "total program costs".

Fixed Cost Per FTE X Program FTE = Total Program Cost

"Total Program Costs"

Total Program Costs were then compared to the following:

1. Total FTE's per program (to arrive at cost per FTE).
2. Number of students completing training for the year (to arrive at cost per completion).
3. Number of students available for employment (to arrive at cost per student available for employment.
4. Number of students placed on jobs in specified training areas or related occupational areas (to arrive at cost per student).

4.5.2 COST PER FTE

In this method a total program cost is calculated in the same manner as the cost comparison. Total program cost is then compared to the FTE's per program.

Total Program Cost ÷ Program FTE = Cost Per FTE

This method is not intended to be used to compare programs between schools. The value of cost per FTE is that it gives a more accurate accounting of total costs relating to a specific program than can be determined by considering the program budget alone.

5 LIMITATIONS

5.1 Time Factor

This study has been restricted to 12 weeks and one researcher.

5.2 CHANGE OF DIRECTORS

Butte was in the process of changing vo-tech center directors. Since the new director has so recently taken charge, many policies and plans have not been established well enough to give accurate data. For this reason, Butte withdrew from the study. A letter has been sumbitted explaining the situation. (see Appendix V pp.40)

5.3 COMPLEXITY OF THE TOPIC

Due to the complex nature of the subject of the research it was difficult to give complete and extensive coverage to all portions.

5.4 BIAS OF INTERVIEWEE

The reader is reminded that the persons interviewed were representative of particular institutions which may introduce certain bias.

5.5 INTERPRETING AND ANALYZING OPEN-ENDED QUESTIONS

Open-ended questions were selected as being the best method of questioning although they too may have limitations.

5.6 SENSITIVE NATURE OF QUESTIONS

Due to the sensitive nature of some questions, reponses were not as complete as they may have been had less sensitive questions been asked.

5.7 VARYING METHODS OF ACCOUNT AND RECORD KEEPING BETWEEN COLLEGES AND VOCATIONAL TECHNICAL CENTERS

Methods of accounting for budgets, placement, enrollment, etc. are different between all of the community colleges and Northern. These records are different yet from those kept by the five vo-tech centers. These differences in accounting and record keeping made some comparisons impossible.

5.8 PLACEMENT DOES NOT ALWAYS REFLECT THE TRUE VALUE OF EDUCATION

Placement data only measures what has happened to graduates at a point in time when a follow-up study is conducted. Sometimes a graduate will secure employment in his occupational area or some related area after the follow-up has been conducted. On the other hand, sometimes a graduate will leave a job shortly after a follow-up is conducted.

6 FINDINGS

6.1 QUESTIONNAIRE RESULTS

The questionnaires with responses from all eight vocational schools are paraphrased in the statements below. The findings of the questionnaire fall into the following five categories:

6.1.1 LONG RANGE PLANS

Questions 1, 2, and 4 deal with long range plans. Below a summary of what was said in response to questions 1 and 4:

1. If you were granted whatever funds you needed to improve your vocational programs, what would you do?
2. If you were to add one new program, other than the programs you presently have, what would you add the first year? The second year? The third year?

These answers were given under the assumption all needed funds were available. Questions which deal directly or indirectly with long range plans are 1, 2, and 4. For more complete explanations see the questionnaire. Below is a paraphrase of what was said by each of the respondents in regard to questions 1 and 4. Please refer to those questions for explanations and rationale.

1. Billings

Billings would like to continue in service training to accommodate open entry/open exit instruction. Facilities for individualized instruction would like to be expanded. Because of the complexities of keeping adequate records when using open entry/open exit methods, computerization is needed. Based on the findings of a needs assessment, Mr. Burgess felt a diesel program is needed. He also felt needs assessments should be conducted on agri-business and agri-production.

2. Dawson College

Dawson would like to add a drafting program, and auto mechanics program and a diesel mechanics program. Complete facilities would be needed for these programs. (Classrooms, equipment, and instructors)

3. Great Falls

Great Falls would like to diversify their program offerings. Two areas mentioned for additions were distributive education and agri-business.

4. Havre

Two additional buildings would help ease the over crowded conditions at Northern by enabling them to offer some key classes every quarter. The only program expansion being considered at this time is dental technology.

5. Kalispell

Flathead Community College recently changed presidents. The new president (Don Lindahl) felt the most needed improvement would be the addition of a vocational director, and at least four more full time instructors. Additional programs that Flathead Community College would like to start are: agri-technician, health occupations, and small engines or farm mechanics.

MILES CITY

Expansion of the nursing program to handle more students as well as expansion of programs into allied health. Radio/T.V. broadcast and building trades were felt to be needed.

7. MISSOULA

Additional programs was felt to be the most needed improvement at Missoula. The areas of health occupation, accounting, and heavy industrial mechanics (mining in particular) was felt to hold the most promise for future expansion.

8. HELENA

Helena Vo-Tech needs to replace test, shop, and custodial equipment. They would also like to expand into certain occupational fields which they have already surveyed (industrial fields and crafts.)

The table of Appendix II page 23 is a table of those programs identified by the respondents as being those which they would most like to add to their program offerings.

6.1.2 NEEDS THE INSTITUTIONS ARE FULFILLING

Reviewing the responses to question 5 will disclose that there is no uniform method of conducting needs assessments for vocational education programs in the state. It became apparent during the discussion of question 5 that not all schools have the same resources for conducting needs assessments. It was also found that it is generally agreed by the respondents that placement is a key indicator of program success and need. In response to the question, "How do you determine when a program should be dropped?", 5 of 7 responses used placement as criteria. In response to the question, "What programs are the most needed?", 5 of 7 used placement as criteria to substantiate their selection of programs.

6.1.3 ADVANTAGES OF LOCATION

Questions 17, 18, and 19 summarize best the locational advantages of particular vocational education programs. Three types of advantages were covered in these questions; financial advantages, advantages to local community and advantages in terms of program goals. Question 14, 15, and 16 deal with placement which is also tied to locational advantages. Below is a paraphrase of what the respondents

said in response to questions 17, 18, and 19. For more detailed explanations, the reader should refer to those questions of the respective questionnaire.

Billings is a population center (over 93,000 in Yellowstone County) as well as a trade and transportation center. People in the Billings geographic area receive economical and social benefits from the centers existance.

Glendive - People in northeastern Montana can receive training in vocational education without traveling so far. Jobs are available locally and Dawson has good instructors who won't leave Glendive.

Kalispell give people in the Flathead area vocational education at a price they can afford. Many of the people wouldn't attend school at all if it weren't for Flathead Community College because of the cost and their ties to the valley.

Great Falls is a population and industrial center as a consequences, many of the students from Great Falls Vo-Tech get jobs in Great Falls. The Vo-Tech is a source of trained labor for the area.

Havre - Because Northern is also a teacher college, they can also train vocational instructors. Being a state college, they find it easier to get high quality instructors in many courses.

Miles City - Miles Community College trains people from eastern Montana for jobs in eastern Montana. People who live in the mountains seem to prefer to stay there.

Missoula - Because Missoula is a population center many students from Missoula get jobs in Missoula. Clinical facilities such as hospitals and forests are also available.

Helena is centrally located in the state and provides good part time job opportunities. Being the state capital the vo-tech is ideally located to serve the state government with manpower.

6.1.4 ROLE OF THE INSTITUTIONS IN THE STATE VOCATIONAL SYSTEM

Question 10 of the questionnaire deals directly with the role of the institution in the state vocational system. (Question: "Speaking of the state vocational system, what do you see as the role of this institution?"). All schools saw their role as serving a geographic area with vocational training.

6.1.5 PROGRAM LISTINGS

A current listing of vocational training being conducted at the eight vocational centers is listed by school with D.O.T. occupational titles (see page 24) and by program (see page 35).

6.2 STATISTICAL METHODS EMPLOYED IN RESEARCH

6.2.1 COST COMPARISON ANALYSIS

Before any cost comparison can be made there are several changes which will need to be made. Those changes which will need to be made are listed below:

1. More Comparative Records Between Colleges and Vo-Tech Centers

The five vo-tech centers report information such as placement, budgeting, enrollment, current FTE and other pertinent information to the OSPI on a regular basis. Of the three community colleges, Miles City conducts a formal follow up of students placed. The other two, Glendive and Kalispell, record no follow up in written form, but instructors do keep track of graduates informally. Northern Montana College reports its follow up data to the university system but records were not available. Budgetary, enrollment, and FTE data from the community colleges and Northern Montana College were not comparable to records of the five centers.

2. More Consistent Grouping of Programs for Reporting Placement and Budget Data

The five vo-tech centers all report placement and budget data on a common form, however, the manner in which they group the programs varies from center to center. These inconsistencies make comparison between programs impossible, as you would be comparing apples and oranges, so to speak.

Example--Business and Office:

GREAT FALLS	TOTAL STUDENTS ENROLLED
Steno-Secretary	84
Clerk-typist	88
General Office Clerk	18
Legal Secretary	17
Medical Secretary	19
Keypunch Operator	16
Data Processing	20

BILLINGS	TOTAL STUDENTS ENROLLED (cont.)
Business and Office (under this heading - bookkeeping, clerk typist, general office clerk, secretarial/ stenographer)	57
MISSOULA	
Business and Office (included in this category are: bookkeeping, general office clerical, secretarial, steno-graphic, clerk typing, business machines, legal secretary, medical secretary, keypunch operator, basic business data processing, computer operator training and computer programmer training.	325

There are various reasons for these inconsistencies. Billings, for example, incorporates open entry/open exit instruction as well as individualized instruction. This makes further break down of record keeping very complicated and uncomparable. Missoula incorporates a cluster approach which involves many of the same problems.

3. SPREADING THE COST OF MAJOR CAPITAL EXPENDITURES

Many vocational education programs require expensive equipment for operation. The addition of new equipment or the replacement of old equipment appears to drastically effect the cost of a program from one year to the next. A method of distributing the cost of capital expenditures over several years has not been utilized thus large expenditures one year may distort the program cost compared to another year.

4. FURTHER EXAMINATION OF COST COMPARISON ANALYSIS

If the three changes that are listed above are made, a further examination of the analysis method still needs to be conducted. The analysis is built on two assumptions: First, an assumption was made that there were no budgetary inconsistencies between fixed costs and program budgets. For example, if part of the program cost (like supervisory salaries) is placed in the fixed

costs, the total program cost will appear lower than it really is. Secondly, further examination of the "average current FTE's " should be made to insure that no statistical distortions are present.

6.2.2 COST PER FTE (See 8.2 page 18)

A cost per FTE can be calculated if the following changes are made: (see methodology page 5)

1. If a cost per FTE is to be done on the community colleges and Northern, then their records will have to be converted to correspond with the five vocational technical centers. If this is not done, some program budget costs could be mixed with fixed costs. The result would be total program costs appearing lower than they actually are. This same point holds true for the five vocational centers.

2. The cost of major capital outlays must be spread over a series of years to avoid large cost fluctuations from year to year. (see 7.2.1 number 3)

A cost per FTE can only be used to more accurately measure true program costs (it reflects fixed costs and enrollments). Using a cost per FTE to compare one program to another would be invalid for the following reasons:

1. Community needs, industrial needs and student needs are not taken into consideration, in calculating "cost per FTE".

2. Quality of education is not measured. It seems reasonable to assume there is an inverse relation between quality of education and "cost per FTE". This assumption is based on the fact that the more experienced instructors cost more and the same holds true for updated equipment.

Its value lies in measuring program cost against needs the program is serving.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 QUESTIONNAIRE

When examining these conclusions and recommendations it should be remembered they are drawn from the opinions of experts.

7.1.1 ROLE OF THE INSTITUTIONS IN THE STATE PLAN

CONCLUSIONS

4 of the 8 schools saw their role in the state vocational system as serving some geographic area with vocational education. The other four responses were quite dissimilar and showed no consistent pattern. Two schools indicated that a state vocational system was rather vague.

RECOMMENDATION

If the state vocational system is based on geographics, then it should be communicated to all schools what their geographic area is (for purposes of determining needs). If the state vocational system is not based on geographics then a statement of what the state vocational system is should be communicated to all schools. Each school would then be able to better fulfill its role in light of the state vocational system.

7.1.2 LONG RANGE PLANS

CONCLUSIONS

All of the schools would like to add at least one new program. Some of the programs already have needs assessments conducted. By examining Appendix II p. 23 it is apparent many of these programs are similar or duplicates of programs already being offered in the state.

RECOMMENDATION

To aid decision makers in the question of duplication, there are certain policies and criteria which should be established. Those are:

1. Establish what constitutes necessary duplication.
2. Establish what constitutes unnecessary duplication.
3. Establish where will future programs be located
   a. It appeared that not all schools had equal resources for needs assessments. If state or local needs is to be a criteria in determining program location, then all schools

should have equal resources to conduct assessments. The needs assessments should be conducted according to some state standard to avoid discrepancies of assessment.

4. The criteria and policies should be clearly communicated to each director of the nine schools.

7.1.3 NEEDS THE INSTITUTIONS ARE FULFILLING

CONCLUSION

The majority of the directors feel that placement is an indicator of program need and success, as indicated by the criteria used to answer the following three questions:

Percent of schools using placement as criteria for answering the question is indicated here:

	PERCENT
1. Which three programs do you feel are the most needed?	62.5%
2. Which three programs do you feel are the most outstanding?	71.4%
3. How do you determine when a program should be dropped?	71.4%

RECOMMENDATION

If placement is to be used as criteria for determining program need and success, then periodic follow up evaluations should be conducted by an impartail party. Placement follow up of the same group of students should be conducted again at later intervals to check placement retention, (see limitation 5.8).

7.1.4 LOCATION ADVANTAGES

CONCLUSION

The advantages of school location fell into two groups:

1. The school is located in a population center. This includes advantages of being a population center, such as clinical facilities, transportation center, co-op training stations,

job availability upon completion of program.

2. The school serves a specific geographic area with vocational education. This includes advantages such as:

   a. Serves people who cannot or will not relocate
   b. Serves specific geographic area with a source of trained manpower.

Many of the advantages appeared to be somewhat similar in nature. What is considered to be an advantage in one location could also be an advantage at other locations. Since advantages of location appear to be so similar, it is important to determine which location offers the greatest advantage.

RECOMMENDATION

In order to determine which location offers the greatest advantage, statewide needs assessments should be conducted. This should be the responsibility of the Board of Public Education through the vocational education component. There are two advantages of having needs assessments conducted by a single impartial party:

1. All present locations will receive equal consideration and treatment. The results of assessments would be comparable because they were conducted by the same party.

2. A program site should be selected based on the merits of the location rather than because one school has better facilities for conducting needs assessments. All schools would have a more equal opportunity to receive consideration for a program. It should be the responsibility of the schools to formally report areas of potential need in their community.

7.2 FINANCIAL COMPARISON

7.2.1 COST COMPARISON ANALYSIS

CONCLUSION

The objective to develop a means to compare programs on a cost basis has not been met for the following reasons:

1. Record keeping differences between the four colleges and five vo-tech centers make reliable comparative figures impossible. This is

because of differences in what is recorded, to whom it is recorded and how information is recorded. (see 5.7)

2. There is no consistent method of grouping programs within an occupational cluster for purposes of comparability.

3. Due to large capital outlays from year to year, program costs often appear higher or lower than the costs actually are. The costs of major capital outlays need to be spread over the life of the equipment.

4. Cost comparison alone could result in a lower quality of education for the students. This kind of analysis does not measure need for a program or what purpose the program is intended to serve. Secondly, a cost comparison does not measure educational quality. Since updated equipment and experienced instructors cost more, there could be a relation between program cost and program quality.

5. The method of reporting program cost is inconsistent among the eight schools surveyed. What is reported as a program cost at one school is considered an ancillary cost at another school.

It should be recognized that a cost comparison between programs will indicate nothing regarding the need the program is designed to fulfill. This is a very important point because many programs which are similar in course title, are designed to fulfill different needs. A cost comparison will only show how much more or less one program costs than another.

RECOMMENDATION

Based on the above conclusion and after attempting several methods of financially comparing programs, it is the recommendation of this writer that programs not be compared to programs, but that programs costs be compared to the needs programs are fulfilling.

7.2.2 COST PER FULL TIME EQUIVALENT

CONCLUSION

A cost per FTE can give a more accurate estimate of true program cost because it reflects fixed costs and enrollments as well as program budget costs. This will be of value when comparing program costs against needs the program is serving. It should be used to compare programs between schools for the same reasons given in 7.2.1.

RECOMMENDATION

A cost per full time equivalent should be conducted when the following changes are made:

1. A standard method of accounting and record-keeping between colleges and vocational technical centers must be developed.
2. Program costs and ancillary costs must be reported in the same manner from one school to another school. (see 5.7)
3. The costs of major capital outlays must be spread over several years to avoid distorting costs from one year to the next.
4. The need each program is designed to fulfill must be clearly defined. This will provide a base to which the cost per full time equivalent can be compared.
5. The cost per full time equivalent should be compared to the need the program is fulfilling. Based on this comparison a decision can be made regarding the value of the program in comparison to the cost of the program.

7.3 PROGRAM TITLES

CONCLUSION

During the course of the study it became apparent to the researcher that a program can not reliably be judged by its title. For example, does a bookkeeper-accountant program give the same level of training as an accountant assistance program? Does an "Automotive Service Technology" program give the same level of training as an "Automotive Mechanic" program?

RECOMMENDATION

It is recommended terminology identifying classes or programs should be consistent throughout all schools for the purpose of identifying like or unlike classes or programs of the Montana post secondary vocational-technical education system. This would assist students to more readily identify and understand curriculum offerings and course content of the system.

8 DEFINITIONS

8.1 COST COMPARISON ANALYSIS - a name selected by the researcher for a method of comparison program costs between schools.

8.2 FTE - Full Time Equivalent - twenty contact hours per week is equal to one FTE. FTE is computed by dividing a students total weekly contact hours by twenty.

8.3 COST PER FTE - a name selected by the researcher for a method of calculating program costs (including fixed costs). (see page 5)

8.4 VOCATIONAL PROGRAM - a pre-determined series of classes a student would take in order to become employable at some job or jobs. (i.e. welding, auto mechanics, bookkeeping, mid-management)

8.5 CLASS - an instructional part of a program. For example: Tune-up is a class in auto mechanics.

8.6 OCCUPATIONAL CLUSTER - a number of programs which are related by the nature of the occupation they train for. Example - Health Occupations is an occupational cluster which includes nursing, dental assistant, nurse aid, etc.

8.7 FIXED COSTS - costs of services which all programs benefit from such as; administrative costs, ancillary costs, classes or services which are common to all programs (like communications or evaluation services).

8.8 PROGRAM BUDGET COSTS - those variable costs which are directly tied to the operation of a specific program (no fixed costs are included). These are costs under "program budget" in the annual budget requests.

8.9 TOTAL PROGRAM COST - fixed costs plus program budget cost.

8.10 PROGRAM FUNCTION - what a program is intended and designed to do.

8.11 OCCUPATIONAL AREA - that occupation or occupations a student has been prepared for through his vocational training.

8.12 RELATED AREA - some occupation which is closely related to the occupational area the student has been prepared for.

Appendix I

SAMPLE QUESTIONNAIRE

WICHE QUESTIONNAIRE RATIONALE

SCHOOL INTERVIEWED:

PERSON INTERVIEWED:

DATE:

Q. 1. If you were granted whatever funds you need to improve your vocational programs, what would you do? Why?

R. -Determine long range plans and what is needed to accomplish them. Why the plans were made is also answered here.

Q. 2. Are there any factors other than funds which would restrain you from making that improvement? If so, what?

R. -Isolate any extraordinary factors which might be a factor in long range planning.

Q. 3. If you were going to rebuild your curriculum what would be the first program you would add? What would be the second? What would be the third?

R. -Determine what the current needs of the community are.

Q. 4. If you were to add one new program each year, other than the programs that have already been approved, what program would you add the first year? The second year? The third year?

R. -Determine long range plans of the institutions in regards to program additions in the future.

Q. 5. What process do you go through when determining what programs to offer?

R. -Determine if needs assessments are conducted and what process is used when conducting an assessment.

Q. 6. Looking at the programs within your school; in priority order, which three programs do you feel are the most needed? Why?

R. -Determine present community need and what criteria is used to establish need.

Q. 7. Which programs do you have the most trouble getting adequate equipment for?

R. -Determine which programs are in need of better equipment.

Q. 8. Let's suppose you had decided to drop a vocational program, so that those funds could be allocated to another existing vocational program or be used to start a new program, under that condition would you:

a) Drop a program? If so, which one?
b) Allocate those funds to an existing program? Which program and why?

R. -Locate any marginal programs or programs that are no longer serving a need. Also to determine what criteria is used to make this kind of decision.

Q. 9. List from 1 to 3 those programs you feel are your most outstanding? Why.

R. -This question is designed to learn what programs are considered the "best" at each school and learn what criteria is used to determine this.

Q. 10. Speaking of the state vocational system, what do you see as the role of this institution?

R. -This question is to help "draw a picture" of what the state vocational system is in the eyes of the school directors or presidents.

Q. 11. What areas do you see vo-ed could serve but is not?

R. -This is an attempt to isolate community and area manpower needs.

Q. 12. (Ask only if not previously covered) How do you determine when a program should be discontinued?

R. -This is to learn what criteria is used when discontinuing a program.

Q. 13. Of the listed on your sheet, what percentage of the students are:

-a) Working towards a specific career
-b) Presently employed but learning additional skills

-c) Exploring new careers

R. -Who is vo-ed serving? Pre-service training or upgrading?

Q. 14. How do you feel your placement is in this area?

a) Excellent
b) As high as can be expected
c) Could be higher
d) Lower than it should be

R. -This is an attempt to learn how the schools feel their success is in their vocational programs.

Q. 15. What factors keep your placement from being as high as you would like to see it?

R. -A follow up to question 14, this question looks at what any restraining factors are to a program or school location.

Q. 16. What factors do you attribute your success to?

R. -This question is tied to locational advantage. It should explain factors which are favorable to various locations.

Q. 17. What are some of the chief financial advantages of conducting these programs at_____?

R. -This is an attempt to learn what the financial advantages of a location are.

Q. 18. What are some of the advantages to the local community these programs provide?

R. -This is an attempt to learn what need the schools are fulfilling on a local level.

Q. 19. Speaking in terms of the goals of the program, what is the advantage of conducting these programs at _____?

R. -This question deals with locational advantages.

Q. 20. Of those students who leave the program before completion, what is the reason they usually leave?

a) Already found a job
b) Were only attending to improve certain skills
c) Couldn't afford to continue
d) Decided they weren't interested in that occupational area

e) Other reasons - explain
f) This topic has never been investigated

R. -What needs are the programs failing to fulfill?

Appendix II

PROGRAMS IDENTIFIED AS POTENTIAL
AREAS OF EXPANSION BY SCHOOL

MISSOULA

1. Inhalation Therapy
2. Heavy Industrial Mechanics
3. Accounting

BILLINGS

1. Diesel Mechanics
2. Agri-Business and Agri-Production

GREAT FALLS

1. Distributive Education
2. Agri-Business
3. Some kind of Health Occupations other than what is being done in the hospitals

KALISPELL

1. Agri-Technician (both pre-employment and upgrading)
2. Health Occupations
3. Mechanics

HAVRE

1. Dental Technician

GLENDIVE

1. Drafting
2. Auto Mechanics
3. Diesel Mechanics

MILES CITY

1. Radio and Television
2. Allied Health
3. Building Trades

HELENA

No specific programs identified

SCHOOL BILLINGS

Appendix III

PROGRAM LISTINGS

1973-1974

PROGRAM	DOT OCCUPATION(S)	
Agriculture Education		
Farm Implement Repair	Farm Implement Repairman	
Distributive Education		
General Merchandising	General Merchandiser	
Food Catering		
Health Occupations		
Nurse's Aide	Nurse's Aide	
Practical Nurse	Practical Nurse	
Registered Nurse (Retraining)	Registered Nurse (Retrained)	
Surgical Technology	Surgical Technician	
Ward Clerk	Ward Clerk	
Veterinary Assistant	Veterinary Assistant	
Office Occupations		
Bookkeeping	Bookkeeper	
Clerk Typist	Clerk Typist	
General Office Clerical	General Clerical Office Worker	
Steno/Secretary	Steno Typist	
Trades and Industrial		
Automobile Mechanics	Auto Mechanic	
Auto-Body Fender Repair	Auto-Body Fender Repairman	
Drafting	Draftsman	
Diesel Mechanics	Diesel Mechanic	
Food Service Occupations	Food Serviceman	
Refrigeration & Air Conditioning Mechanics (also includes heating)	Refrigeration & Air-Conditioning & Heating Mechanics	
Welding	Welder	

SCHOOL GLENDIVE

PROGRAM LISTINGS

1973-1974

PROGRAM	DOT OCCUPATION(S)	
AGRICULTURE		
Agri-Business Management	Agri-Business Manager	
Livestock Technology (Animal Production & Feeding)	Livestock Technician	
DISTRIBUTIVE EDUCATION		
Mid-Management	Manager	
TECHNICAL EDUCATION		
Civil Engineering Technology	Civil Engineer Aide	
Law Enforcement	Dispatcher	
	Deputy Sheriff	
	Patrolman/Police	
	Detective	
	State Highway Patrolman	
BUSINESS & OFFICE		
Secretarial Science	Business Machines Operator	
	Clerk Typist	
	Steno Typist	

SCHOOL GREAT FALLS PROGRAM LISTINGS
1973-1974

PROGRAM	DOT OCCUPATION(S)	
Health Occupations		
Dental Assistant	Dental Assistant	
* Inhalation Therapy	Inhalation Therapist	
* Medical Lab Technology	Medical Lab Technician	
Nurse's Aide	Nurse's Aide	
Practical Nursing	Practical Nurse	
* Registered Nursing (Retraining)	Registered Nurse (retrained)	
*Surgical Technology	Surgical Technician	
* Operating Room Technology	Operating Room Technician	
Office Education		
Bookkeeping	Bookkeeper	
Business Machines	Business Machine Operator	
Clerk Typist	Clerk Typist	
Computer Operator	Computer Operator	
Computer Programmer	Computer Programmer	
File Clerk	File Clerk	
General Office Clerk	General Office Clerk	
Key Punch Operator	Key Punch Operator	
Legal Secretary	Legal Secretary	
Medical Secretary	Medical Secretary	
Steno/Secretary	Steno Typist	
Trade and Industrial		
* Automobile Mechanic	Auto Mechanic	
* Automobile Engine Diagnostics	Auto Engine Diagnostician	
* Auto-Body Fender Repair	Auto-Body Fender Repairman	
Watch and Instrument Repair	Watch and Instrument Repairman	

* To Be In Operation By 1976

PROGRAM	DOT OCCUPATION(S)	
Trade and Industrial (cont.)		
*Welding (Combination)	Welder	
*Fire Service Training Academy	Fireman	
Other Programs		
Handicapped (Multi-Occupations)	Various Occupations	
Volunteer Fire Fighters		

* To Be In Operation By 1976

SCHOOL HAVRE PROGRAM LISTINGS

1973-1974

PROGRAM	DOT OCCUPATION(S)	
Agriculture Education		
Agri-Business	Agri-Business Manager	
Farm & Ranch Management	Farm & Ranch Manager	
Grain, Feed, Seed, & Farm Supply	Grain, Feed, Seed, & Farm Supplier	
Health Occupations		
Registered Nurse	Registered Nurse	
Practical Nurse	Practical Nurse	
Office Education		
Bookkeeper/Accountant	Bookkeeper/Accountant	
Key Punch Operator	Key Punch Operator	
Legal Secretary	Legal Secretary	
Medical Secretary	Medical Secretary	
Steno/Secretary	Steno Typist	
Technical Education		
Diesel Technology	Diesel Technician	
Drafting Technology	Drafting Technician	
Electrical Technology	Electrical Technician	
Electronics Engineering Technology	Electronics Engineering Technician	
Mechanical Engineering Technology	Mechanical Engineering Technician	
Construction Engineering Technology	Construction Engineering Technician	
Metals Technology	Metals Technician	
Quality Control	Quality Controller	
Trades and Industrial		
Auto-Body and Fender Repairman	Auto-Body & Fender Repairman	

1973-1974

PROGRAM	DOT OCCUPATION(S)	
Trades and Industrial (cont.)		
Automobile Mechanic	Automobile Mechanic	
Cosmetologist	Cosmetologist	

SCHOOL HELENA

PROGRAM LISTINGS

1973-1974

PROGRAM	DOT OCCUPATION(S)	
Agriculture		
(see Ag Diesel)		
Business and Office		
Accounting	Accounting Assistant	
Business Machines	Business Machine Operator	
Clerk Typist	Clerk Typist Operator	
Keypunch Operating	Keypunch Operator	
Legal Secretary	Legal Secretary	
Medical Secretary	Medical Secretary	
Steno/Secretary	Steno Typist	
Trades and Industry		
Industrial Electronics	Industrial Electrician	
Air Frame & Power Mechanics	Air Frame & Power Mechanic	
Building Construction Trades		
Industrial Electronics	Industrial Electrician	
Automobile Mechanics	Automobile Mechanic	
Business Machine Repair*	Business Machine Repairman	
Consumer Electronics Repair	Consumer Electronics Repairman	
Machinist	Machinist	
Diesel Mechanics I	Diesel Mechanic	
Diesel Mechanics II	Diesel Mechanic	
Ag Diesel	Ag Diesel Repairman	
Truck and Coach Driver	Truck and Coach Driver	
Radio Communications & Related	Radio Communicator	
Welding (Combination)	Welder	
Health Occupations		
Nursing	Nurse	

*Not Funded

SCHOOL KALISPELL PROGRAM LISTINGS

1973-1974

PROGRAM	DOT OCCUPATION(S)	
Distributive Education		
Mid-Management	Manager	
Business and Office		
Accountant/Bookkeeper	Accountant/Bookkeeper	
Business Machine Operator	Business Machine Operator	
Clerk Typist	Clerk Typist	
Steno/Secretarial	Steno Typist	
Technical Education		
Forestry Technology	Forestry Technician	
Land Surveying	Land Surveyor	

SCHOOL MILES CITY PROGRAM LISTINGS

1973-1974

PROGRAM	DOT OCCUPATION(S)	
Distributive Education		
Mid-Management	Manager	
Health Occupations		
Nursing (Associate Degree)	Nurse	
Business and Office		
Accounting/Bookkeeping	Accountant/Bookkeeper	
Business Machines	Business Machines operator	
Clerk Typist	Clerk Typist	
Legal Secretary	Legal Secretary	
Medical Secretary	Medical Secretary	
Steno/Secretary	Steno Typist	
Technical Education		
Library Technology	Librarian	
Electronics Technology	Electronic Technician	
Trades and Industrial		
Automobile Mechanics	Automobile Mechanic	
Welding (Combination)	Not a full program, complements other programs	

SCHOOL MISSOULA PROGRAM LISTINGS
1973-1974

PROGRAM	DOT OCCUPATION(S)	
Agriculture Education		
Timber Harvesting	Timber Harvester (CETA)	2 year Tech. prog. seemed to be the main choice-lyr. in Tech program is close to our old aid program
Forestry Technology	Forestry Technician	
DISTRIBUTIVE Education		
Apparel & Fashion Merchandising	Apparel & Fashion Merchandiser	
Hotel and Lodging	Hotel and Lodging Manager	
Marketing Management	Retail Manager	
Retail Sales	Retail Salesman	
Health Occupations		
Nurse's Aide	Nurse's Aide	
Practical Nurse	Practical Nurse	
Psychiatric Aide	Psychiatric Aide	
Operating Room Technology	Operating Room Technician	
Dietary Aid	Dietary Aid	
Business Data Processing		
Computer Operator	Computer Operator	
Computer Programmer	Computer Programmer	
Key Punch	Key Punch Operator	
Office Occupations		
Bookkeeper's Assistant	Bookkeeper	
Junior Accountant	Junior Accountant	Projected for 1977 a course within Curr.
Clerk Typist	Clerk Typist	
Legal Stenographer	Legal Stenographer	
Medical Receptionist	Medical Reception - ist	
Medical Secretary/Transcription	Medical Secretary & Transcriptionist	
Steno/Secretary	Steno Typist	
Technical Education		
Aviation Education	Aviation Ground Operators	

PROGRAM	DOT OCCUPATION(S)	
Technical Education (cont.		
Aviation Commercial Pilot	Aviation Commercial Pilot	
Electro-Mechanical Technology	Electro-Mechanical Technician	2 year
Trades and Industrial		
Fry Cook Occupations	Food Serviceman (CETA)	
Heavy Equipment Maintenance	Heavy Equipment Mechanic	
Heavy Equipment Operation	Heavy Equipment Operator	
Heavy Truck Maintenance	Heavy Truck Mechanic	
Small Engine Repair	Small Engine Repairman	
Welder (Combination)	Welder	
OTHER		
Communications	All Programs	Course for all
Educational Aide	Teachers Aide	
Multi Occupational for Handicapped	Various Occupation	Transcends all programs, service

Appendix IV

Listing of Vocational Training Being Conducted in Montana with the Aid of State and Federal Monies by Program

	BILLINGS	GREAT FALLS	HELENA	MISSOULA	BUTTE	NORTHERN	MILES	DAWSON	FLAT-HEAD	
AGRICULTURE EDUCATION										
Agri-Business							X		X	
Farm & Ranch Management							X			
Grain, Feed, Seed, and Farm Supply							X			
Livestock Technology									X	
Forestry Technology					X					X
Timber Harvesting					X					
Ag-Diesel				X						
Farm Implement Repair		X								
BUSINESS & OFFICE										
Bookkeeping	X		X	X	X	X	X	X		X
Junior Accountant					0					
Computer Operator					X					
Computer Programmer					X					
Keypunch Operator			X	X	X	X	X			
Business Machines			X	X				X	X	X
General Office Clerical	X		X		X					
Secretary/Stenographer	X		X	X	X	X		X	X	X
Clerk-Typist	X		X	X	X	X		X	X	X
Legal Secretary			X	X	X	X	X	X		
Medical Secretary			X	X	X	X	X	X		
Medical Transcriptionist					X					
File Clerk			X							

0 - Program to be in operation by 1977 or before

X - On-going Programs

MARKETING & DISTRIBUTION	BILLINGS	GREAT FALLS	HELENA	MISSOULA	BUTTE	NORTHERN	MILES	DAWSON	FLAT-HEAD
Mid-Management Merchandising				X			X	X	X
Retail Sales				X					
Apparel & Fashion Merchandising				X					
Hotel and Lodging				X					
Food Catering	X								
HEALTH OCCUPATIONS									
Registered Nurse						X	X		
Licensed Practical Nurse	X	X	X	X	X	X			
Nurse Aide	X	X		X					
RN Refresher	X								
Ward Clerk	X								
Psychiatric Aide				X					
Dietary Aide				X					
Dental Assisting		X							
Surgical Technology	0	0							
Inhalation Therapy		0							
Medical Lab. Technology		0							
Operating Room Technology		0		X					
Veterinary Assistant	0								

0 - Program to be in operation by 1977 or before.

X - On-going Programs

TECHNICAL EDUCATION	BILLINGS	GREAT FALLS	HELENA	MISSOULA	BUTTE	NORTHERN	MILES	DAWSON	FLAT-HEAD	
Electrical Technology						X	X	X		
Electrical Engineering Tech.							X			
Electro Mechanical Tech.					X					
Mechanical Engineering							X			
Industrial Electronics Avionics				X						
Consumer Electronics				X						
Construction Engineering Technology							X			
Civil Engineering Tech.						X			X	
Civil Engineering Aide									X	
Surveying		0								X
(Aviation) Ground School					X					X
(Aviation) Commercial Pilot					X					X
Library Technician								X		
Quality Control							X			

0 - Program to be in operation by 1977 or before.

X - On-going Programs

TRADES & INDUSTRY & LAW ENFORCEMENT	BILLINGS	GREAT FALLS	HELENA	MISSOULA	BUTTE	NORTHERN	MILES	DAWSON	FLAT-HEAD
Automobile Mechanics/ Tech.	X	0	X		X	X	X		
Automobile Engine Diagnostics		0							
Automobile Body and Fender Repair	X	0				X			
Automobile Upholstering	0								
Diesel Mechanics/Tech.			X			X			
Truck & Coach Mechanics/ Truck Mechanics			X	X					
Industrial Diesel			X						
Heavy Equipment Maintenance				X					
Small Engines				X	X				
Air Frame and Power Mechanics			X						
Machinist			X		X				
Drafting	X				X	X			
Welding	X	0	X	X	X			X[2]	
Metals Technology						X			
Air Conditioning and Refrigeration	X								
Business Machines Repair			X[1]						
Watch and Instrument Repair		X							
Volunteer Fire Fighters		X							
Fire Service Field Training		0							
Truck & Coach Driver			X						
Heavy Equipment Operator.				X					

NOTE: Trades & Industry & Law Enforcement is continued on next page

[1]Not Funded

[2]Only compliments Auto Mechanics

0 - Program to be in operation by 1977 or before

X - On-going Program

TRADES & INDUSTRY & LAW ENFORCEMENT (continued)	BILLINGS	GREAT FALLS	HELENA	MISSOULA	BUTTE	NORTHERN	MILES	DAWSON	FLATHEAD	
Building Trades				X						
Cosmetology							X			
Food Service Occupations		X			X					
Radio Communications and Related				X						
Law Enforcement									X	
Human Services									X	X
OTHER										
Multi-Occupations (Handicapped)			X		X					
Educational Aide					X					

X - On-going Programs

0 - Program to be in operation by 1977 or before.

AUG 21 '75

Appendix V

BUTTE VOCATIONAL TECHNICAL CENTER
404 SOUTH WYOMING
BUTTE, MONTANA
59701

PHONE (406) 792-4256

MAURICE DRISCOLL
Vocational Director

MELVIN COTTRELL
Asst. Director

DAVE KELTZ
Asst. Director

August 19, 1975

Mr. Bill Ball
Executive Secretary
State Advisory Council, Vocational Education
Armory Bldg.
Helena, Montana 59601

Dear Bill,

This letter us to confirm our telephone conversation August 19, 1975, concerning the WICHE questionnaire. We appreciate the efforts of the Council's committee to objectively and rationally conduct evaluation activities required of the Council. This type of study concerning post-secondary vocational education opportunities in Montana public schools is vital to the identification of immediate and long-range needs, goals and plans.

In reviewing the WICHE questionnaire I find that we are unable at this time to respond to the questionnaire for two major reasons: (1) with the new administration (10 days in effect) at the center, sufficient research and review has not been conducted in order that rationale and objective responses be made, and (2) responding to the questionnaire would invalidate the questionnaire instrument and provide data that was unreliable for the study.

We are looking foward to working with the Council in the future and plan to visit early in September. If there is any information needed by the Council, we will support those efforts. Good luck with the study.

Sincerely,

Joe

JES/es

Joe Sicotte, Ph.D.
Director

B I B L I O G R A P H Y

Budget Requests for the following Vocational Technical Centers (Unpublished), 1974 to 1975: Billings Vo-Tech, Great Falls Vo-Tech, Helena Vo-Tech, and Missoula Vo-Tech.

Department of Labor, Dictionary of Occupational Titles.

Office of the Superintendent of Public Instruction, Directory of Montana Post Secondary Vocational Education, 1974.

This intern report was read and accepted by a staff member at:

Agency: Montana Advisory Council for Vocational Education

Address: P. O. Box 1157 Helena, Montana 59601

This report was completed by a WICHE intern. This intern's project was part of the Resources Development Internship Program administered by the Western Interstate Commission for Higher Education (WICHE).

The purpose of the internship program is to bring organizations involved in community and economic development, environmental problems and the humanities together with institutions of higher education and their students in the West for the benefit of all.

For these organizations, the intern program provides the problem-solving talents of student manpower while making the resources of universities and colleges more available. For institutions of higher education, the program provides relevant field education for their students while building their capacity for problem-solving.

WICHE is an organization in the West uniquely suited for sponsoring such a program. It is an interstate agency formed by the thirteen western states for the specific purpose of relating the resources of higher education to the needs of western citizens. WICHE has been concerned with a broad range of community needs in the West for some time, insofar as they bear directly on the well-being of western peoples and the future of higher education in the West. WICHE feels that the internship program is one method for meeting its obligations within the thirteen western states. In its efforts to achieve these objectives, WICHE appreciates having received the generous support and assistance of the Economic Development Administration; the Jessie Smith Noyes Foundation; the National Endowment for the Humanities; the Wyoming Office of Manpower Planning; and of innumerable local leaders and community organizations, including the agency that sponsored this intern project.

For further information, write Bob Hullinghorst, Director, Resources Development Internship Program, WICHE, P.O. Drawer 'P', Boulder, Colorado 80302 or call (303) 492-7177.

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